UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/980,125	02/20/2002	Marc Francis Vincent Dussac	L7307.01120	8207

24257 7590 02/23/2004

STEVENS DAVIS MILLER & MOSHER, LLP
1615 L STREET, NW
SUITE 850
WASHINGTON, DC 20036

EXAMINER	
LAVINDER, JACK W	
ART UNIT	**PAPER NUMBER**
3683	

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/980,125	DUSSAC ET AL.	
	Examiner	Art Unit	
	Jack W Lavinder	3683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,12,15,26,38 and 40-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,12,15,26,38 and 40-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 15, 26, 38, 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Harbrecht, 3,417,660.

Harbrecht discloses

a rigid member (1, 6)

an aggregate (2) completely filling the internal cavity of the rigid member

a rigid plate (3)

an elastic means (4)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harbrecht in view of Fukahori, 4,899,323.

Harbrecht discloses solid, pellet-shaped bodies (2), but fails to disclose some of the bodies being hollow. Fukahori discloses using hollow bodies (5, 6) in combination

with solid bodies in a damper in order to tune the damper to function most efficiently at various vibration ranges. Therefore, it would have been obvious to a person having ordinary skill in the art to add hollow bodies to Monroe's damper as taught by Fukahori in order to tune the damper for various vibration ranges. Thus, making a more versatile damper without having to change the structure of the damper--only have to change the make–up of the solid bodies.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harbrecht in view of Shtarkman, 4,504,044.

Harbrecht discloses using an aggregate of particles having the same size, shape and material. Shtarkman discloses that the particles can be made of a variety of different materials, sizes and shapes (column 4, lines 54-end, column 5, lines 1-6). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the solid bodies of Monroe to have a different size, shape or composition, as taught by Shtarkman, in order to improve the damping effects of the damper.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harbrecht in view of Monroe, 1,995,620.

Harbrecht fails to disclose using an aggregate of particles and a viscous liquid filling the spaces between the solid bodies. Monroe discloses using particles with liquid in the internal cavity of the damper (page 2, column 2, lines 34-37). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the damping aggregate of Harbrecht to include a viscous liquid

filling the spaces between the solid bodies in order to improve the damping effects of the damper based on the type of vibrational frequencies trying to be damped.

Claims 40-42, 44, 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mouille, 4,458,862 in view of WIPO, WO85/05425 and Harbrecht, 3,417,660.

Mouille discloses dampers (24, figures 1 and 2) on a rotary wing aircraft gearbox (15, figures 1-2). Mouille discloses a damper in the form of a weight (24) and an elastic lever arm (19c figures 1 and 2 or 19d, figures 3 and 4). Mouille does not disclose a damper having an aggregate.

The WIPO publication discloses that it is old and well known to use an aggregate damper (see abstract) on a stabilizer bar in an aircraft to consume oscillation energy from the construction (stabilizer) and thereby damp the oscillations.

Harbrecht discloses

a rigid member (1, 6)

an aggregate (2) completely filling the internal cavity of the rigid member

a rigid plate (3)

an elastic means (4)

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the damper of Harbrecht, in view of the teachings of the WIPO publication, in the suspension system of a rotary wing aircraft as disclosed in Mouille as an alternative design to damp the vibrations of the gearbox. The use of the

aggregate damper is considered to perform the same function and solve the same problem as the mass damper, i.e., reduce unwanted vibrations on the gearbox.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mouille in view of WO 85/05425 and Harbrecht, and further in view of Fukahori.

The combination set forth above fails to disclose some of the bodies being hollow. Fukahori discloses using hollow bodies (5, 6) in combination with solid bodies in a damper in order to tune the damper to function most efficiently at various vibration ranges. Therefore, it would have been obvious to a person having ordinary skill in the art to add hollow bodies to Monroe's damper as taught by Fukahori in order to tune the damper for various vibration ranges. Thus, making a more versatile damper without having to change the structure of the damper--only have to change the make–up of the solid bodies.

Claims 48-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mouille in view of WO 85/05425 and Harbrecht, and further in view of Shtarkman, '044.

The combination set forth above fails to disclose using an aggregate of particles having the same size, shape and material. Shtarkman discloses that the particles can be made of a variety of different materials, sizes and shapes (column 4, lines 54-end, column 5, lines 1-6). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the solid bodies of Monroe to have a different size, shape or composition, as taught by Shtarkman, in order to improve the damping effects of the damper.

Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mouille in view of WO 85/05425 and Harbrecht, and further in view of Monroe, '620.

The combination set forth above fails to disclose using an aggregate of particles and a viscous liquid filling the spaces between the solid bodies. Monroe discloses using particles with liquid in the internal cavity of the damper (page 2, column 2, lines 34-37). Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the damping aggregate of Harbrecht to include a viscous liquid filling the spaces between the solid bodies in order to improve the damping effects of the damper based on the type of vibrational frequencies trying to be damped.

Any inquiry concerning this communication should be directed to Jack W Lavinder at telephone number 703-308-3421.

Jack W Lavinder
SPE
Art Unit 3683